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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,881	03/23/2004	Gregory Lee Brookshire	TI-36253 (1962-08800)	2680

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EXAMINER	
HUYNH, NAM TRUNG	
ART UNIT	**PAPER NUMBER**
2643	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/806,881	BROOKSHIRE, GREGORY LEE	
	Examiner	Art Unit	
	Nam Huynh	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuhl et al. (US 2005/0041613).

A. Regarding claim 1, Kuhl et al. discloses a method for transmitting information between single network devices with a master/slave configuration which comprises the following:

- Several transmission modes such as an active and sniff mode (page 1, paragraphs 9-11).
- A master that can assign a certain number of slots for data communication to an addressed slave (page 1, paragraph 0010).
- A sniff mode in which the slots for master-to-slave data transmission or command length are reduced (page 1, paragraph 0011).
- A serial or Bluetooth interface (page 8, paragraph 0084).

B. Regarding claim 2, Kuhl et al. discloses that the header portion of the data sequence may contain additional separate code sequence that may indicate specific

content or a specific treatment with respect to transmission handling (page 3, paragraph 0024). Therefore, the header portion or initialization command length can have a greater length than the command lengths associated with multiple modes.

C. Regarding claim 5, Kuhl et al. discloses that in active mode, the master schedules the transmission or writes to and from different slaves. The slave then listens or reads from each master-to-slave transmission slot for incoming data sequences or packets (page 1, paragraph 0010).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3-4, 6, and 8-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhl et al. (US 2005/0041613) in view of Litwin (US 6,704,584).

A. Regarding claims 3-4 and 6, Kuhl et al. discloses a method for transmitting information between single network devices with a master/slave configuration which comprises the following:

- Several transmission modes such as an active and sniff mode (page 1, paragraphs 9-11).
- A master that can assign a certain number of slots for data communication to an addressed slave (page 1, paragraph 0010).

- A sniff mode in which the slots for master-to-slave data transmission or command length are reduced (page 1, paragraph 0011).
- A serial or Bluetooth interface (page 8, paragraph 0084).

Kuhl et al. does not explicitly disclose that the master device comprises a processor of a battery operated electronic device, the slave comprises of a wireless LAN adapter, and that both the master and slave devices implement indirect memory access. Litwin discloses a method for data transference between a master and slave device comprising the following:

- A master device that is battery powered and has a CPU or processor (figure 1, item 165 and figure 4, item 412).
- Memory (figure 1, items 106, 108).
- An input/output adaptor (figure 1, item 112) or wireless LAN adapter.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the wireless device of Litwin in the data transmission system of Kuhl et al. in order to extend the battery lives of the slave devices.

B. Regarding claim 8, Kuhl et al. discloses that the slave device is configurable to communicate in multiple modes with a different read/write command length as applied to claims 1 and 2 above. Kuhl et al. does not explicitly disclose that the slave is a battery-powered device. Litwin discloses a battery powered wireless device (figure 4, item 416) that acts as a slave, comprising a CPU or processor (figure 1, item 102). Therefore it would have been further obvious to combine the wireless device of Litwin in

the data transmission system of Kuhl et al. in order to extend the battery lives of the slave devices.

C. Regarding claim 9, Kuhl et al. discloses a header portion of a data sequence that at least contains an address portion but may also contain additional code (page 2, paragraph 0013). Therefore it would be further obvious to one of ordinary skill in the art to include read/write or data length in this sequence in order to implement a specific application.

D. Regarding claims 10-11, Kuhl et al. discloses a sniff mode in which the slots for master-to-slave data transmission or command length are reduced (page 1, paragraph 0011). This sniff mode is enabled to decrease power consumption in battery-powered devices (page 1, paragraph 11). Since this mode is operable to battery-powered devices, it would further be obvious to one of ordinary skill in the art that this mode would only be operable when the battery provides power to the processor and slave device.

E. Regarding claim 12, Litwin discloses a procedure in which a master monitors its power level and if the power goes below a threshold, then it becomes a slave and appoints a new master. Litwin does not explicity disclose that a slave device is configured to operate in a low power compatible mode when the battery reaches a predetermined threshold value. However, one of ordinary skill in the art would recognize that the teaching of monitoring and assigning a threshold value for the battery power, as taught by Litwin, can be followed for the slave devices in the invention of Kuhl et al. in order to lower transmission activity which in turn would increase the

transmission bandwidth for other network devices requiring higher transmission bandwidth.

F. Regarding claim 13, Kuhl et al. discloses an active mode and a sniff mode. The sniff mode is a lower transmission mode that has read/write commands that are reduced in length (page 1, paragraph 0010-0011). Kuhl et al. does not explicitly disclose determining a power consumption parameter. Litwin discloses a power consumption parameter (figure 3, item 312). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to follow the teachings or Litwin and add a power consumption parameter in the invention of Kuhl et al. in order to determine if a device on the network should go into sniff mode.

G. Regarding claims 14-15, Kuhl et al. discloses that the master can assign a certain number of slots for incoming for data communication to an addressed slave by a type indication contained in the data packets (page 1, paragraph 0010). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use 32 or 16 bits in the sequence.

H. Regarding claim 16, Kuhl et al. discloses a Bluetooth protocol (page 8, paragraph 0084).

I. Regarding claims 17-18, Litwin discloses a power consumption parameter for a battery-powered device having less than a predetermined threshold (figures 3 and 4, items 312,412).

J. Regarding claims 19, Kuhl et al. discloses a master coupled to a slave device (figure 5); and two operating modes, an active and a sniff mode. The sniff mode is a

lower transmission mode that has read/write commands that are reduced in length (page 1, paragraph 0010-0011).

K. Regarding claim 20, Kuhl et al. discloses that the master transmits a data sequence to the slave consisting of a header portion that may indicate a special transmitting mode (page 2, paragraph 0013).

L. Regarding claim 21, Kuhl et al. discloses that each slot contains a packet containing data or other information to be transferred and then further distinguishes different types of packets (page 5, paragraph 0051). Therefore one of ordinary skill in the art at the time the invention was made would recognize that a Secure Digital Input/Output (SDIO) protocol command could be used as well as other wireless protocols depending on specific application.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhl et al. (US 2005/0041613) and Litwin (US 6,704,584) as applied to claim 1 above, and further in view of Hjelt et al. (US 2004/0266480).

The combination of Kuhl et al. and Litwin disclose the limitations set forth in claim 1, but does not explicitly disclose a serial interface that comprises a serial peripheral interface (SPI). Hjelt et al. discloses a master/slave configuration in which an SPI interface is used. Furthermore, Hjelt et al. defines an SPI interface as a 4-wire synchronous, inter-processor, master-slave interface (page 5, paragraph 0052). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a serial peripheral interface in the combination of Kuhl et al. and Litwin in order to allow communication between the master and slave devices.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam Huynh whose telephone number is 571-272-5970. The examiner can normally be reached on 8 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 571-272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NTH
11/3/05

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